EX PARTE OR LATE FILED

WILEY, REIN & FIELDING

1776 K STREET, N.W.
WASHINGTON, D.C. 20006
(202) 429-7000

WRITER'S DIRECT DIAL NUMBER

FACSIMILE
(202) 429-7049

February 4, 1994

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street, N.W. -- Room 222
Washington, D.C. 20554

Re: Notice of Ex Parte Contact
ET Docket No. 93-62

Dear Mr. Caton:

Wiley, Rein & Fielding hereby files an original and one copy of a notification of a written ex parte contact in ET Docket No. 93-62. Copies of the attached summary of comments in the above-captioned docket were distributed to Thomas P. Stanley and Robert Cleveland.

If any questions should arise concerning this notification, please contact the undersigned at (202) 828-3182.

Respectfully submitted,

WILEY, REIN & FIELDING

By: _____
Eric W. DeSilva

Encl.

WILEY, REIN & FIELDING

SUMMARY OF COMMENTS FCC RULEMAKING ON GUIDELINES FOR EVALUATING THE ENVIRONMENTAL EFFECTS OF RADIOFREQUENCY RADIATION

ET DOCKET NO. 93-62
1993-1994

R. Michael Senkowski
Bruce L. McDonald
WILEY, REIN & FIELDING
1776 K Street, N.W.
Washington, D.C. 20006
(202) 429-7000

February 3, 1994

FOREWORD

By January 25, 1994, 73 government agencies, business entities, associations, ad hoc groups, and individuals had filed documents treated by the Federal Communications Commission as initial comments on the Notice of Proposed Rule Making, released April 8, 1993, to amend and update the Commission's guidelines and methods used for evaluating effects of radiofrequency radiation from FCC regulated facilities. An opportunity has been provided to submit reply comments, which presently are due February 24, 1994. The initial comments are summarized herein. The summaries are arranged alphabetically by commenter name.

We have done our best to represent each commenter's positions accurately on a range of issues within a few pages and in a consistent format. Due to space and time constraints, however, many supporting arguments have been truncated and rephrased to conserve space. Accordingly, in all cases, it is highly advisable to review the commenter's actual text. All summaries have page references to the commenter's text.

TABLE OF CONTENTS

Page

Page

Page

ALCATEL SEL
Comments on RF Environmental Guidelines Amendments
(August 16, 1993)

Interest: German firm comments through its Product Management Department for Mobile Communication.

Adoption of 1992 ANSI/IEEE Standard:

- Alcatel SEL notes a "counterpart guideline DIN/VDE 0848 Part Z," a German draft, expected to serve as a proposal for the European standardization association CEN/CENELEC," and suggests there is value in standards compatibility (1).

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. Uncontrolled environment:

- Not addressed.

Measurement and compliance procedures:

- Not addressed.

Categorical exclusions:

- For "low power devices," the comments suggest defining "radiated power" as "the root mean square of the radiated power averaged within the time interval of 6 minutes" because the thermal effect is the only one "which can be proved" and thermal peak power effects are not "expected with low power devices." No pulsed transmission differences have been proved (2).

- Alcatel SEL suggests expanding the low power exclusion (450 MHz-1500 MHz) up to 2000 MHz, because tissue effects are similar within this range and to avoid "trade restrictions on the American market for hand-held devices of systems operating in the 1800 MHz band" (2).

- The within "2.5 cm of the body" rule limiting applicability of the low-power exclusion should be eliminated for sake of consistency with European standards, because it is arbitrary and not justified by electromagnetic theory or studies (2-3).

Transitional procedures:

- Not addressed.

State preemption:

- Not addressed.

Other issues:

- Not addressed.

AMERICAN PERSONAL COMMUNICATIONS
Comments on RF Environmental Guidelines Amendments
(January 25, 1994)

Interest: PCS proponent. American PCS, L.P., d/b/a American Personal Communications (APC) is the managing general partner and The Washington Post company is an investor/limited partner.

Adoption of ANSI/IEEE Standard:

- APC supports adoption of the guidelines and methods of ANSI/IEEE C95.1-1992 for evaluating RF exposure from all Commission-regulated facilities (2).

- APC opposes the EPA's recommendation against adoption of the ANSI/IEEE C95.1-1992 guidelines and its suggestion that the 1986-era NCRP criteria be used. APC argues that the NCRP criteria are based on the 1982 ANSI guidelines and thus are less current than the FCC's proposal (2-3).

- APC contends that the EPA has not provided sufficient support for the FCC to depart from its proposal, and suggests that in any event, the two guidelines are not significantly different at PCS frequencies to warrant departure from the FCC's proposal (3).

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. Uncontrolled environment:

- Not addressed.

Measurement and compliance procedures:

- Not addressed.

Categorical exclusions:

- Not addressed.

Transitional Procedures:

- Not addressed.

State Preemption:

- Not addressed.

Other Issues:

- Not addressed.

THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED
Comments on RF Environmental Guidelines Amendments
(January 25, 1994)

Interest: The national non-profit association of radio amateurs in the United States.

Adoption of 1992 ANSI/IEEE Standard:

- If the Commission determines that it should adopt a particular standard for RF exposure in lieu of the 1982 ANSI standard, it should not be the ANSI/IEEE 1992 standard. That standard is arbitrary on its face, as it creates distinctions without any rational basis whatsoever (10-13).

- The Commission should rethink this proceeding, and either withdraw the Notice and recast the proceeding as Notice of Inquiry, or refer the entire matter to an agency of competent jurisdiction (2-3).

- See other issues.

Induced currents:

- There are included in the 1992 standard first-time provision for limits on induced and contact currents. These limits extend to 100 MHz exactly. It is difficult to determine the basis for any extension of induced and contact current limits above 30 MHz, but to extend the limit arbitrarily to 100 MHz (the middle of the FM broadcast band), creates distinctions without differences among like licensees in the FM Broadcast Service. The same distinction is made between amateur operations in the 50 and the 144 MHz amateur allocations, though station configurations could be exactly identical (11).

Contact currents:

- See induced currents.

Controlled v. Uncontrolled environment:

- Amateur radio stations would, under the proposed standard, be categorized as operating in "uncontrolled" environments. These are environments which include residential areas. There is, in the ANSI/IEEE 1992 standard, no stated justification for the standard for the "uncontrolled" environment, or for the decision to utilize a safety factor of 50. In fact, there is a claim that the safety factor of 10 for the "controlled environment" "should be safe to all." If that is the

case with respect to the controlled environment safety factor, then the recommendation of a safety factor of 50 for uncontrolled environments is completely and utterly specious (11-12).

- Nor is there an adequate delineation of controlled versus uncontrolled environments to permit any reasonable categorization for application processing purposes, assuming again that the Commission is not expert in determining environmental safety issues. Overall, it would be impossible for the Commission to implement this standard in its present form with any degree of confidence that the proper standard has been adopted. It would be completely unfair to applicants for new communications facilities as well (12).

Measurement and compliance procedures:

- Regardless of whether the Commission adopts a revised standard for environmental processing of applications relative to RF exposure, and regardless of which standard is ultimately adopted, there is no justification for subjecting each of the more than 630,000 licensees of the Commission in the Amateur Service to submission of an environmental assessment with each application for a new or modified station license (13-17).

- Given sufficient information about the potential hazards of operating a hand-held transceiver with the antenna next to one's head, or operation with high power and an indoor antenna, for example, most amateurs adopt the philosophy of prudent avoidance that obligates the user of electromagnetic devices to avoid unnecessary exposure in the home and the workplace as a common-sense response to potential -- but not yet proven -- health hazards. Already the RF safety sections of major ARRL publications urge radio amateurs to practice prudent avoidance wherever possible (17).

- Amateur stations, because of the intermittent operation, low duty cycles, and relatively low power levels used, do not, except in rare instances, exceed even the proposed 1992 ANSI/IEEE standard. The risk of exceeding those levels would be only that of the licensee and his or her family in any case, and it is apparent that it is better to rely in this experimental service on education and testing of licensees, rather than submission of a complex environmental assessment which would not be valid for long in most cases anyway (18).

Categorical exclusions:

- The FCC historically has recognized that the Amateur Radio Service should be categorically exempted from individual licensee facilities review and should instead rely on education in which ARRL and its publications play an important part. It is believed that the educational efforts conducted by the League have been, and will

continue to be sufficient to apprise radio amateurs of the need to minimize RF exposure and to consider the issue when configuring new amateur stations (7-10).

- There are infrequently encountered amateur radio activities which can, for short periods, produce significant field intensities. Hand-held transceivers, for example, which are widely used by radio amateurs, especially in emergencies, may produce significant, highly localized fields. Unless he or she uses a remote microphone, it is conceivable that the licensee may occasionally be exposed to RF levels at or even slightly above the ANSI/IEEE maxima. Also, some amateurs have no choice but to employ indoor antennas in the face of typically restrictive land use covenants that preclude the use of appropriately high, outdoor antennas. No one other than the licensee, however, is likely to be subjected to levels in exceed of even the 1992 ANSI/IEEE maxima under any circumstances (15-16).

Transitional procedures:

- Not addressed.

State preemption:

- The Commission, if it adopts the Notice proposal, will be obligated to facilitate the installation of amateur antennas in configurations which will permit compliance with the RF exposure guidelines by issuing a more comprehensive preemption statement with respect to amateur antennas than now exists, and must completely preempt the judicial enforcement of restrictive covenants which cause amateur antennas to be installed indoors or at locations on a horizontal plane with human occupants of residences. Indeed, such an order is overdue anyway; but the combination of adoption of a strict RF exposure standard and continuation of a hands-off attitude with respect to antenna covenants is tantamount to a license revocation, as it would preclude the operation of any amateur station subject to both restrictions (15).

Other issues:

- The Commission's Notice and proposal do not meet the requirements of the Administrative Procedure Act. The Notice (a) proposes no rule changes at all, nor anything on which to base a substantive comment; (b) asks for comment, not on the RF exposure guidelines themselves, but on the implementation of them, without substantive analysis anywhere in the Notice; (c) suggests that the Commission has not decided to adopt the 1992 ANSI standard, but offers no other standard as an alternative; (d) proposes a standard for RF exposure that is not readily available to the general public for review; and (e) addresses a subject that is, according to the Commission, beyond the Commission's expertise to adjudicate substantively anyway (2-6).

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
Comments on RF Environmental Guidelines Amendments
(January 25, 1994)

Interest: Telecommunications service provider and equipment manufacturer; no specific interest expressly declared.

Adoption of 1992 ANSI/IEEE Standard:

- The new ANSI standard reflects the view of a large group of experts in all relevant disciplines working in government, academia and industry. Because the 1992 standard represents the most recent and comprehensive review of relevant information and the broadest consensus of the engineering and scientific community, it should be adopted at this time. (1-7)

- Neither the NCRP nor the IRPA standard establishes that the Commission should not adopt the 1992 ANSI standard. The ANSI standard represents the work of a broad body of experts and reflects consideration of more recent data than is the case regarding the NCRP or IRPA recommendations. (5-6)

- The fact that the 1992 ANSI standard is already in the process of adoption by other expert bodies (including ACGIH, NATO, and the FCC itself) further supports its adoption by the Commission. (6-7)

- The ANSI standard's MPE of 10mW/cm beginning at 3 GHz in the controlled, and at 15 GHz in the uncontrolled environment, and the averaging time of 10 seconds are the same as the MPE in the American National Standard for the Safe Use of Lasers, ANSI Z136.1-1993 at 300 GHz, where both standards apply. Because the depth of penetration into the human body of radiofrequency energy beginning at around 30 GHz is similar to that of infrared energy at 300 GHz, the biological effects would be expected to be about the same. Use of the 10mW/cm MPE in the ANSI laser safety standard, and other internationally recognized laser standards support the same limit where applicable in the 1992 ANSI standard and show that the NCRP and IRPA standards unjustifiably limit the MPE to 1mW/cm beginning at 1.5 and 2 GHz, respectively. (5-6)

- The Commission should delegate to the Chief Engineer authority to modify the rules to reference future revisions of the 1992 ANSI standard that do not raise substantive compliance issues and should commit the staff to consult with IEEE Subcommittee IV on major interpretation issues that may arise. (3)

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. Uncontrolled environment:

- Not addressed.

Measurement and compliance procedures:

- AT&T does not object to providing whatever additional information the Commission needs on forms beyond a single "No" answer. However, requesting a more elaborate response does not provide assurance that the 1992 ANSI standard is indeed met. Only examination of the applicant's underlying data is sufficient for that purpose. The Commission will have to decide if it has the resources to evaluate such data meaningfully. (13-14)

- AT&T supports the FCC's proposal to adopt the new ANSI recommended practice for measuring potentially hazardous electromagnetic fields. The new practice represents the best and most up-to-date practices for making such measurements. (14)

- The NPRM states that compliance with the SAR standard "can be demonstrated through appropriate laboratory measurements." The 1992 ANSI standard does not require laboratory measurements but rather permits establishing compliance "by appropriate techniques." The Commission should make clear that use of numerical methods such as the High-Resolution Finite Difference Time Domain technique is also permitted. (9).

Categorical exclusions:

- Common carrier microwave stations, under Part 21(L), have been properly excluded, and should remain excluded because the data show exposure below ANSI/IEEE 1992 uncontrolled environment MPE limits. Appendix A contains supporting data. (7-8)

- Part 15 devices should not be categorically excluded because some such devices may exceed the MPE for the uncontrolled environment and the low power exclusion may be unavailable. (8-11)

- There is no practical way to ensure that Part 15 devices will only be used in a controlled environment. Therefore, the uncontrolled environment limits should apply in the authorization process. (8)

- Categorical exclusion for devices operating between 0.1 MHz and 1.5 GHz, meeting the uncontrolled environment limit for the low power device exclusion, and not having the radiated element maintained within 2.5 cm of the body would, however, be appropriate because these devices comply with the 1992 standard. (9)

- Because the low power exclusion is intended to be available for devices held in the hand, the hand is obviously not a part of the body requiring 2.5 cm separation from the device. The substantially higher absorption permitted by hands, wrists, feet and ankles than by other body parts supports this obvious reading. (4)

- The existing categorical exclusion for cellular base stations should not be eliminated. The evidence gathered by AT&T indicates that the overwhelming number of cellular base stations produce potential exposures that comply with the new limits for the uncontrolled environment. (10)

- The present categorical exclusion for vehicle-mounted cellular mobile stations should be maintained. Such stations do not pose any threat of exceeding the uncontrolled environment limits. Appendix B contains supporting data. (10)

- As is the case for Part 15 devices, hand-held cellular mobile terminals and PCS handsets could exceed the applicable MPE limit, and the low power exclusion might not be available. In such cases, compliance with the applicable SAR limit would be required. Accordingly, such units should not be categorically excluded. (11)

Transitional procedures:

- Because there are no verified reports of injury or adverse health effects to people caused by exposure to equipment that complied with prior ANSI standards, the Commission's proposal to apply the 1992 ANSI standard to all applications filed (but not those still pending) after the effective date of the new rule should be adopted. (10-11)

- For the same reasons, there is no need for Commission action addressed to equipment presently in use. (11)

State preemption:

- Not addressed.

Other issues:

- Not addressed.

AMSC SUBSIDIARY CORPORATION

Comments on RF Environmental Guidelines Amendments
(January 25, 1994)

Interest: Licensee of the U.S. Mobile Satellite Service System.

Adoption of 1992 ANSI/IEEE Standard:

- Takes no position on the merits of the revised ANSI standard as it is not expert in the area of the bioeffects of RF. (1,8)

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. Uncontrolled environment.

- Not addressed.

Measurement and compliance procedures:

- If the FCC adopts the revised ANSI standard, it also should adopt a specific SAR measurement technique and provide adequate time (at least two years) for the establishment of measurement facilities. (11-12)

- Since mobile equipment typically lasts for only a few years, there is no reason to require a showing of compliance with any new standard, particularly since there is no evidence that the standard in effect at the time of the authorization inadequately protects the public. (13)

Categorical exclusions:

- The existing categorical exclusions remain fully valid and there is no legitimate basis to change them regardless of whether the FCC adopts the new ANSI/IEEE standard. (10)

- The FCC should expand the existing categorical exclusion to include MSS mobile terminals subject to blanket licensing under Part 25, which are not literally covered by the current categorical exclusion. (10-11, Exhibit A)

Transitional procedures:

- Not addressed.

State preemption:

- Based on the national scope of AMSC's service, a national RF exposure standard is essential. Thus, the FCC should preempt any state and local efforts to regulate RF exposure standards, at least in the L-band. (14)

Other issues:

- Not addressed.

APPLE COMPUTER, INC.
Comments on RF Environmental Guidelines Amendments
(January 25, 1994)

Interest: Computer equipment manufacturer whose principal focus is on the safety of computing devices that incorporate radio transmitters such as Data-PCS devices.

Adoption of ANSI/IEEE Standard:

- The adoption of the 1992 ANSI standard is in the public interest. (2)
- Appropriate safety standards should be applied to all personal communications equipment including voice PCS equipment. (5)

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. uncontrolled environment:

- All unlicensed PCS devices should be considered to operate in uncontrolled environments. Also, the term "hand-held" should apply to all unlicensed PCS devices even though they may not literally be hand-held. (4)

Measurement and compliance procedures:

- Not addressed.

Categorical exclusions:

- The FCC should encourage IEEE to quickly reach a decision on whether the categorical exclusion for low power devices can be extended to frequencies above 1500 MHz because the alternative requirement of determining SARs could impede initial product development. Notes that the maximum allowed power for unlicensed PCS devices is 312 milliwatts which compares to the 328 to 333 milliwatts that would be allowed if the ANSI/IEEE low power exclusion were extrapolated to 1890-1930 MHz. (3)

- The FCC and the IEEE should develop low power exclusions for devices that operate up to 6 GHz to account for future product development. With respect to ISM bands, if the FCC adopts low power exclusions that are less than the currently available 1 watt, it should give the industry substantial notice. When considering such low power limits, the FCC should give consideration to the varying duty cycles of isochronous (voice) and asynchronous (data) devices. (3)

Transitional procedures:

- Not addressed.

State preemption:

- Not addressed.

Other issues:

- Not addressed.

ARIZONA DEPARTMENT OF PUBLIC SAFETY

Comments on RF Environmental Guidelines Amendments
(November 12, 1993)

Interest: ADPS comments on behalf of Arizona government agencies that have communications systems. Their scenarios feature wide areas that are sparsely populated (1).

Adoption of 1992 ANSI/IEEE Standard:

- Urges sticking with ANSI/IEEE standard and not "jumping to other standards" such as NCRP or IRPA (7).

- The ADPS does not have sufficient technical expertise to question any of the technical data promulgated in the ANSI/IEEE standard. We accept the exposure standards stated at face value. However, we do question their application to various types of users, and certain circumstances (4).

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. Uncontrolled environment:

- "Radio users of a municipal or state agency should all be considered to be in a controlled environment," because such personnel can be trained. Need controlled environment rules for agencies' mobile units (4-5).

Measurement and compliance procedures:

- An issue related to low power devices is how Effective Radiated Power (ERP) is to be defined with a portable radio antenna. Except for true half-wave antennas at 800 MHz, most portable radio antennas are inductively loaded antennas with gains between 0 and -15 dB. This gain varies with frequency, length, manufacturer, band, and location relative to the user's body. Antenna gains are rarely specified by the radio manufacturer. The assumed gain of a portable radio antenna will be critical in determining what the ERP of the portable radio actually is. ADPS recommends that portable radio manufacturers specify ERP for their products. This will help users determine if their radios meet the new FCC requirements (5).

- Paragraphs 15 and 17 of the NPRM negate exclusions based on radiated power for handheld radios used with the radiating structure within 2.5 cm. of the user's body. Consideration is to then be given to specific absorption rate (SAR) as defined for an uncontrolled environment. ADPS requests that the SAR controlled environment levels be used when users generally fall in the controlled environment classification by virtue of operating training. ADPS also feels that radio frequency manufacturers should define actual SAR levels for their products to ensure user compliance (5).

- "Additional charts and tables" should be developed to define "maximum exposure limits vs. ERP levels" to help tower workers (6). Any burden of measurements should be placed on equipment manufacturers, not public safety land mobile users (8).

Categorical exclusions:

- The "controlled" classification is critical to the State government agencies to allow their portable radio power to operate at 7 watts ERP below 450 MHz (5).

- Land mobile two-way facilities are and should remain categorically excluded (6).

- Requests that "land mobile" be exempted from induced and contact currents requirements on a low power basis (7).

Transitional procedures:

- There should be one-year deferred effective date (8).

State preemption:

- Not addressed.

Other issues:

- Not addressed.

ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC.
AND THE NATIONAL BROADCASTING COMPANY, INC.
Comments on RF Environmental Guidelines Amendments
(January 25, 1994)

Interest: Association of television service providers and broadcasting network.

Adoption of 1992 ANSI/IEEE Standard:

- While it seems highly probable that current FCC RF standards provide an ample measure of safety, revision of the 1982 standards to incorporate new learning will serve the public interest (1-2).

- ANSI standards are the product of careful study, and reflect the considered judgment of experts from the private sector, the academy, and the public sectors. The Commission's reliance on the ANSI guidelines is appropriate (2).

Induced currents:

- Not addressed.

Contact currents:

- Not addressed.

Controlled v. Uncontrolled environment:

- The FCC should adopt use of the "controlled" and "uncontrolled" environments for the purpose of establishing exposure standards (2-5).

- In television broadcasting, four distinct environments exist: office, studio, transmitter, and remote pickup. "Business offices are properly classified as uncontrolled environments." "The Commission should classify studios as uncontrolled environments." "Transmitter buildings, accessible only to authorized personnel, are controlled environments, towers supporting transmitting antennas are controlled environments when fenced or posted." While most should be categorically excluded, mobile pickup equipment should generally be considered controlled, the area around it may be uncontrolled if the equipment is used under "conditions in which persons other than the operator could potentially be exposed to RF radiation" (4-5).